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20422/US**REMARKS*****Amendment to the Claims***

Claim 2 has been amended to correct a typographical error and is now consistent with the subject matter disclosed in claim 11.

***35 U.S.C. 103(a) rejection***

Claims 2-37 were rejected as unpatentable over Tsuei et al. (U.S. Patent 5,589,194 - "Tsuei") in view of Carr et al. (U.S. Patent 5,183,690 - "Carr") and Lee et al. (EP 0 480 729 A1 - note this patent is equivalent to U.S. Patent 5,362,424 and 5,508,041 which share the same Korean priority - "Lee").

The Tsuei and Carr patents were also used by the Examiner in her rejection of 9 April 2003 (Paper No. 17) although now the Tsuei reference is now the primary reference. However, switching the status of the reference does not change the fundamental weaknesses of the Tsuei and Carr in combination (which was addressed in the applicants' response of 7 July 2003) which the Lee reference does not remedy.

As stated by the Examiner, Tsuei fails to teach the size of the microcapsules and fails to teach starch matrix as recited in the applicants' claims. The Examiner also acknowledges that Carr also fails to teach the size of the microcapsules of the applicants' claims. As stated in applicants' 7 July 2003 response, Carr teaches the use of starch granules to form encapsulations on the size of 400 - 1500 microns (compared to applicants' inclusion size range of 0.01 - 2 micron) and as such even if there was a specific teaching, suggestion or motivation to combine Tsuei with Carr, this would only lead to a composition with encapsulation sizes far in excess of the applicants claimed size range.

It also noted that both the Tsuei and Carr references disclose forming their respective compositions by using conventional extrusion techniques and do not form oil-in-water emulsions before extrusion/mixing with the matrix material. The high shear forces associated with these conventional techniques do not allow for the formation of inclusion sizes.

Lee does not remedy the deficiencies of the Tsuei and Carr references for the following reasons.

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First, Lee describes an oil-in-water emulsion which is their final product and is not envisioned to undergo any further processing. The 1-5 micron size range describes the oil-in-water emulsion not the size of the inclusion as in the applicants' claimed material.

Second, the 0.01-2 micron and 1-5 micron ranges are size distribution ranges and does not represent an overlap of ranges, i.e. one does not obtain a composition with inclusion or oil-droplet sizes of strict uniformity (e.g. If it were possible to obtain an all 2 micron size then there could be some basis for overlap if the Examiner could show that the oil-droplet size would necessarily form the inclusion size. However, this is not what these ranges disclose and in any event, this equivalence has not been shown by the Examiner). As such, Lee by definition teaches oil-droplet sizes which are in excess of the range claimed by the applicants.

Third, if the Examiner is asserting that there is some sort of equivalence between Carr and Lee which allows for substitution of elements, it is noted that Carr relates to the use of starch granules while Lee is directed toward the use of "polysaccharide which has metal-chelating capacity". These are vastly different types of polysaccharides and even if there was a teaching, suggestion or motivation to make such a substitution, there would be no reasonable expectation of success for making such a substitution given the differences in physical characteristics between the two different types of polysaccharides.

Fourth, Tsuei and Carr both disclose the use of conventional extrusion techniques to obtain at best encapsulation sizes of 400-1500 microns. However, Lee uses a sonification technique to obtain their 1-5 micron size range (which still is outside the range taught by the applicants). There is no teaching, suggestion or motivation to substitute Lee's sonification technique for the techniques used by Tsuei and Carr. Even if such a combination could be asserted, it still would not approach the ranges taught by the applicants.

It appears that most of the attention has been directed toward the subject matter related to claim 2, however claims 2-37 inclusive have been rejected. It is noted that MPEP 2143.03 states that "To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art." Claims 11-24 are directed toward a method of preparing a composite material which is not taught by Tsuei, Carr and Lee and claims 28-37 are directed to composite materials which specifically refer to the process steps not taught by Tsuei, Carr and Lee.

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Given all the differences between the applicants' invention and the cited references, the applicants' believe that one of ordinary skill in the art having the above references before them but without the benefit of the applicants' claims to serve as a guide would allow the skilled artisan to arrive at the applicants' claimed invention.

Claims 38-41 were rejected as being obvious over Tsuei et al. in view of Carr et al. and Lee et al. as stated above, further in view of Bilbrey (U.S. Patent 5,290,547).

Should the rejection of claims 2-37 be withdrawn, it is believed that the rejections of claims 38-41 should also be withdrawn. However, should the rejection be maintained, the applicants hold that the "as a whole" consideration requirement for establishing obviousness does not allow for Bilbrey's teaching of the use of fragrance oils to be used in isolation. Bilbrey, like Lee, teaches oil-in-water emulsion but lacks a teaching for inclusions. Bilbrey also teaches droplet sizes which are well in excess of that taught by applicants.

It is well known that "virtually all [inventions] are combinations of old elements...Therefore an examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat patentability of the claimed invention. Such an approach would be 'an illogical and inappropriate process by which to determine patentability.'" *Sensotronics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570, 38 USPQ2d 1551, 1554 (Fed. Cir. 1996)." *Rouffet*, 149 F.3d at 1357, 47 USPQ2d 1457.

Absent any reason that the required "as a whole" consideration can be dispensed with, the applicants' hold that Bilbrey cannot properly be combined with Tsuei, Carr and Lee.

#### **Closing**

Applicants also believe that this application is in condition for allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Respectfully submitted,

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**CERTIFICATE OF FACSIMILE TRANSMISSION**

I hereby certify that the foregoing Amendment under 37 CFR § 1.111 is being facsimile transmitted to the United States Patent and Trademark Office on the date indicated below:

Date: 19 April 2004

By: Agata Glinska  
Agata Glinska